FIG. 1

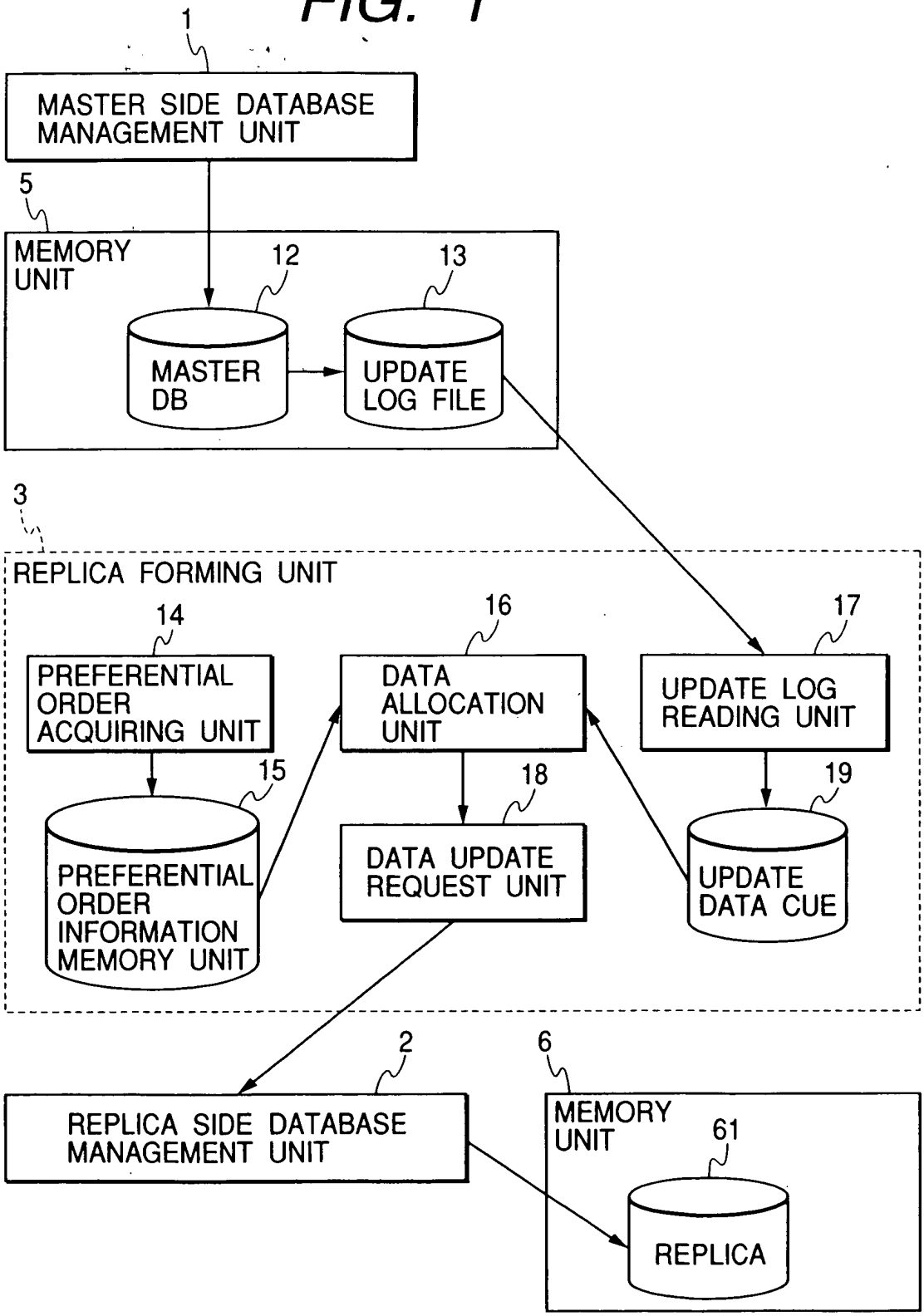

1
MASTER SIDE DATABASE MANAGEMENT UNIT
5
MEMORY UNIT
12
13
MASTER DB
UPDATE LOG FILE
3
REPLICA FORMING UNIT
14
16
17
PREFERENTIAL ORDER ACQUIRING UNIT
DATA ALLOCATION UNIT
UPDATE LOG READING UNIT
15
18
19
PREFERENTIAL ORDER INFORMATION MEMORY UNIT
DATA UPDATE REQUEST UNIT
UPDATE DATA CUE
2
6
REPLICA SIDE DATABASE MANAGEMENT UNIT
MEMORY UNIT
61
REPLICA

FIG. 2

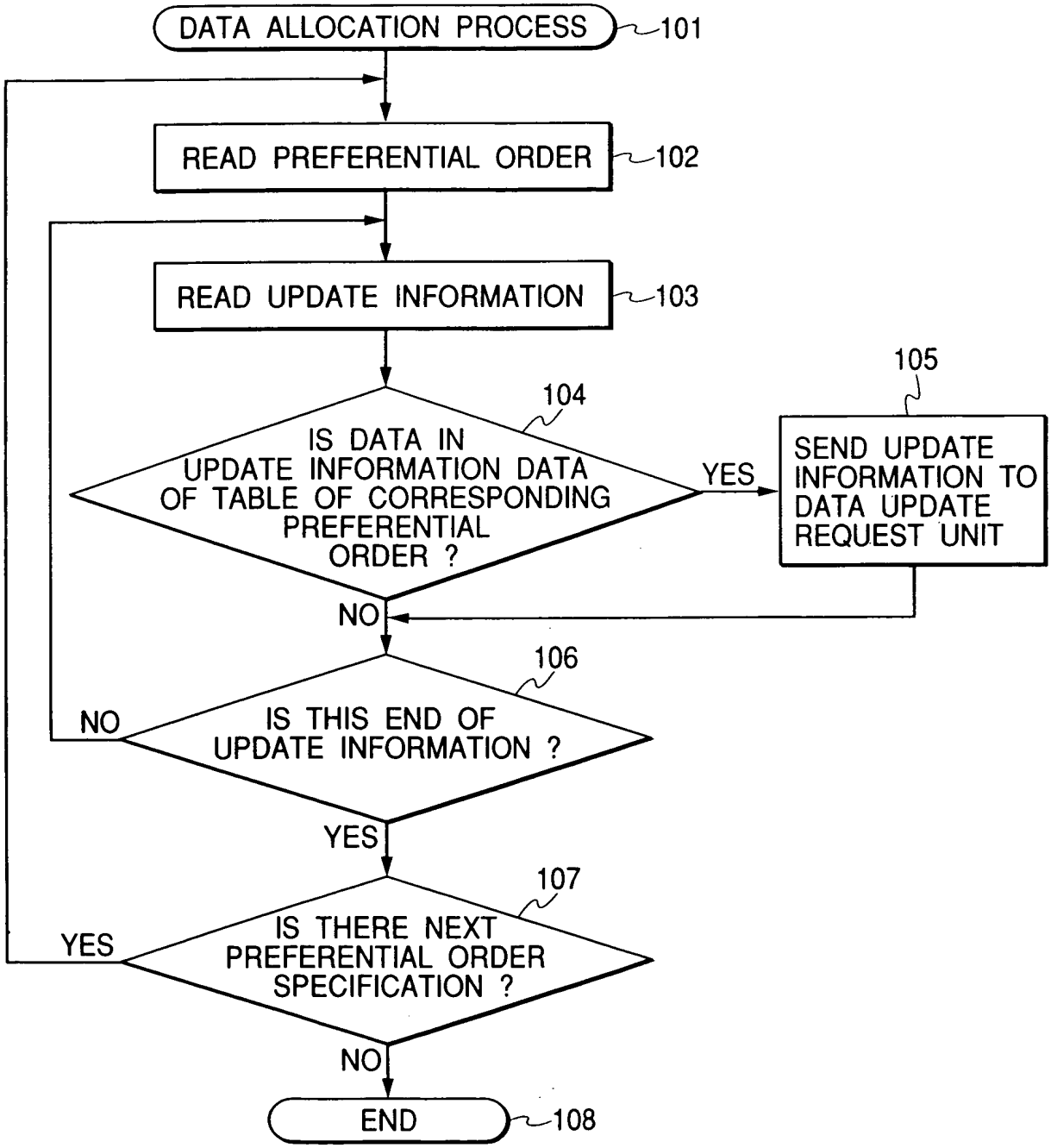

DATA ALLOCATION PROCESS
101
READ PREFERENTIAL ORDER
102
READ UPDATE INFORMATION
103
104
IS DATA IN UPDATE INFORMATION DATA OF TABLE OF CORRESPONDING PREFERENTIAL ORDER ?
YES
105
SEND UPDATE INFORMATION TO DATA UPDATE REQUEST UNIT
NO
106
NO
IS THIS END OF UPDATE INFORMATION ?
YES
107
YES
IS THERE NEXT PREFERENTIAL ORDER SPECIFICATION ?
NO
END
108

FIG. 3

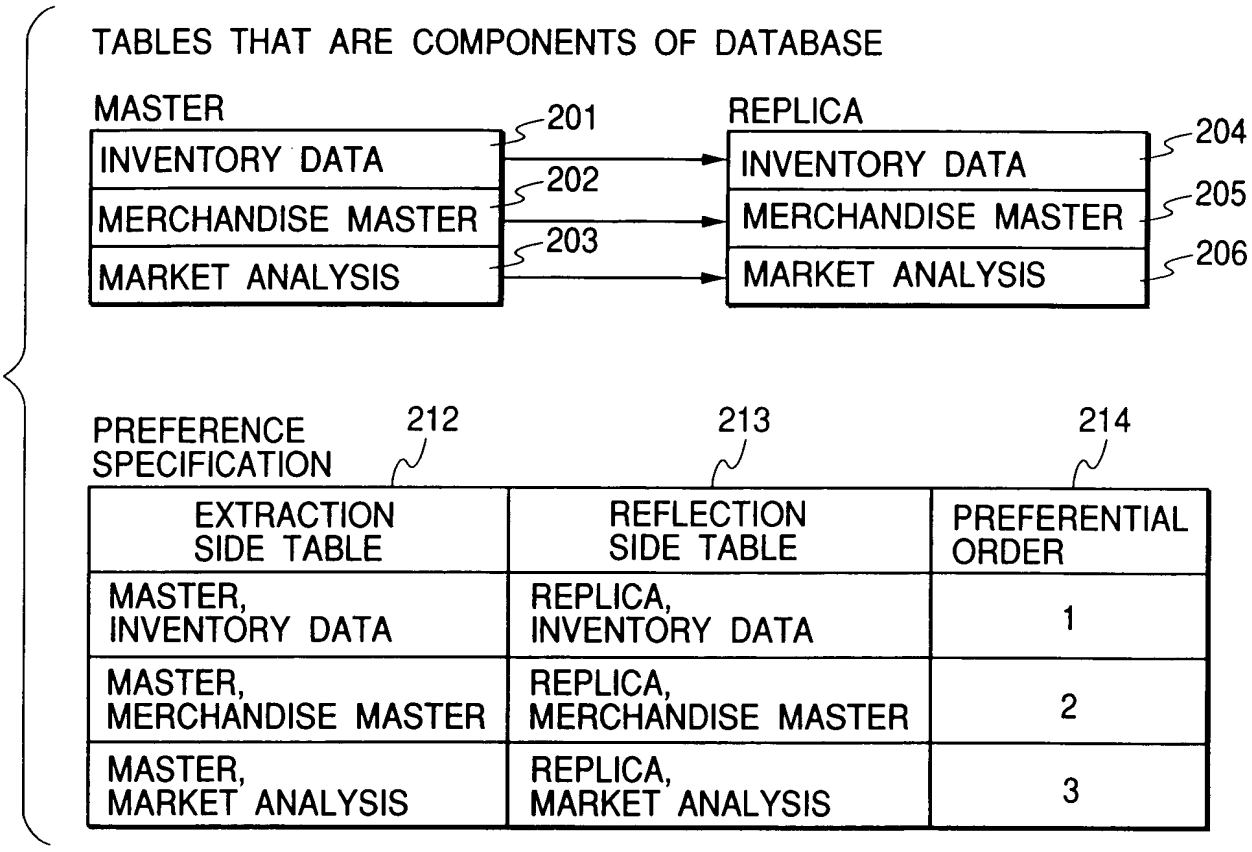

TABLES THAT ARE COMPONENTS OF DATABASE
MASTER
INVENTORY DATA
MERCHANDISE MASTER
MARKET ANALYSIS
201
202
203
REPLICA
INVENTORY DATA
MERCHANDISE MASTER
MARKET ANALYSIS
204
205
206
PREFERENCE SPECIFICATION
212
213
214
EXTRACTION SIDE TABLE
REFLECTION SIDE TABLE
PREFERENTIAL ORDER
MASTER, INVENTORY DATA
REPLICA, INVENTORY DATA
1
MASTER, MERCHANDISE MASTER
REPLICA, MERCHANDISE MASTER
2
MASTER, MARKET ANALYSIS
REPLICA, MARKET ANALYSIS
3

FIG. 4

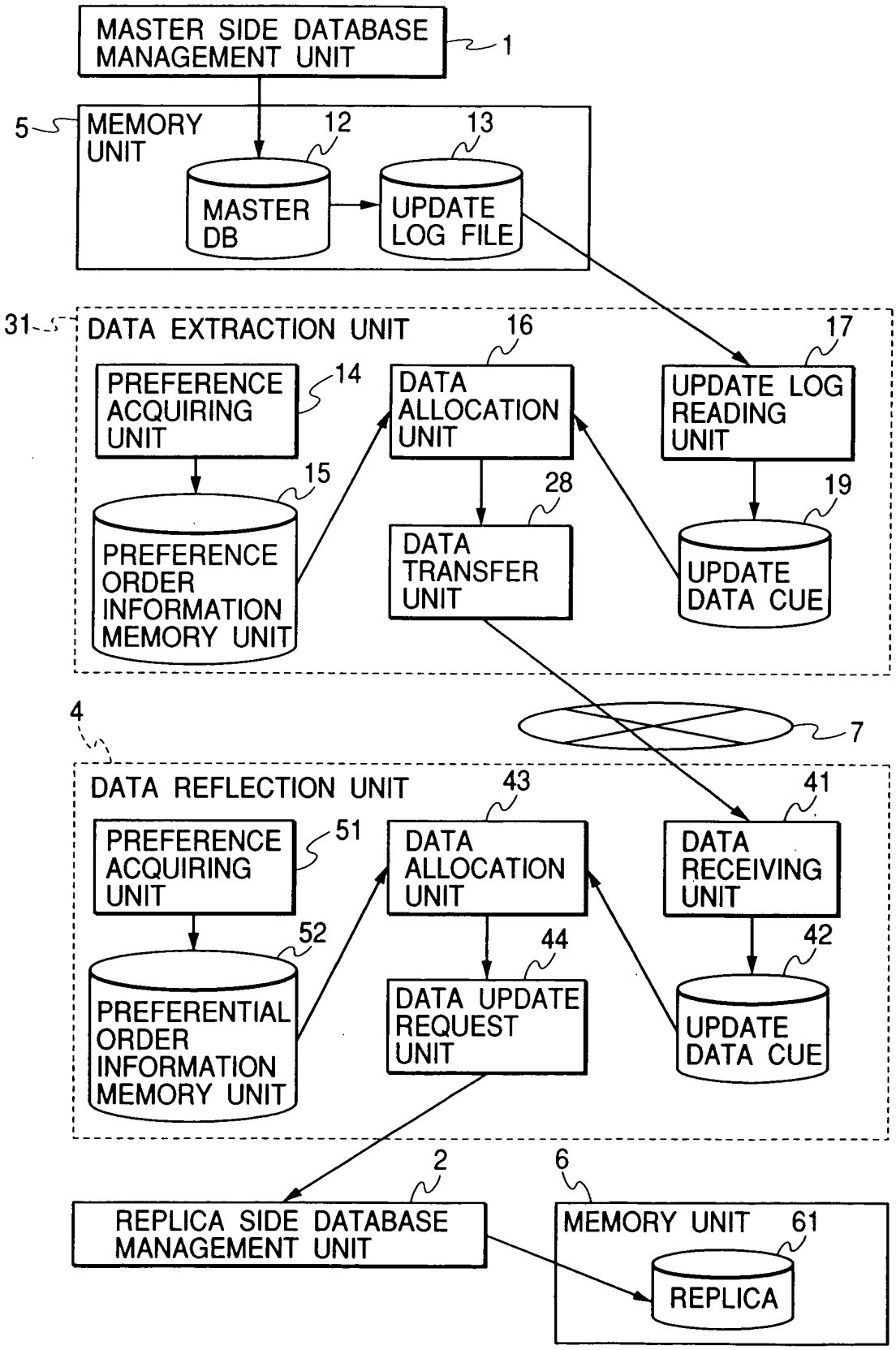

MASTER SIDE DATABASE MANAGEMENT UNIT
1
5
MEMORY UNIT
12
13
MASTER DB
UPDATE LOG FILE
31
DATA EXTRACTION UNIT
16
17
PREFERENCE ACQUIRING UNIT
14
DATA ALLOCATION UNIT
UPDATE LOG READING UNIT
15
28
19
PREFERENCE ORDER INFORMATION MEMORY UNIT
DATA TRANSFER UNIT
UPDATE DATA CUE
4
7
DATA REFLECTION UNIT
43
41
PREFERENCE ACQUIRING UNIT
51
DATA ALLOCATION UNIT
DATA RECEIVING UNIT
52
44
42
PREFERENTIAL ORDER INFORMATION MEMORY UNIT
DATA UPDATE REQUEST UNIT
UPDATE DATA CUE
2
6
REPLICA SIDE DATABASE MANAGEMENT UNIT
MEMORY UNIT
61
REPLICA

FIG. 5

INVENTORY DATA

301 MERCHANDISE CATEGORY	302 MERCHANDISE CODE	303 MERCHANDISE NAME	304 UNIT PRICE	305 INVENTORY
A	0001	A REFRIGERATOR	100,000	15
B	0002	B WASHING MACHINE	60,000	12
C	0032	C CLEANER	30,000	21
A	0230	B REFRIGERATOR	150,000	10

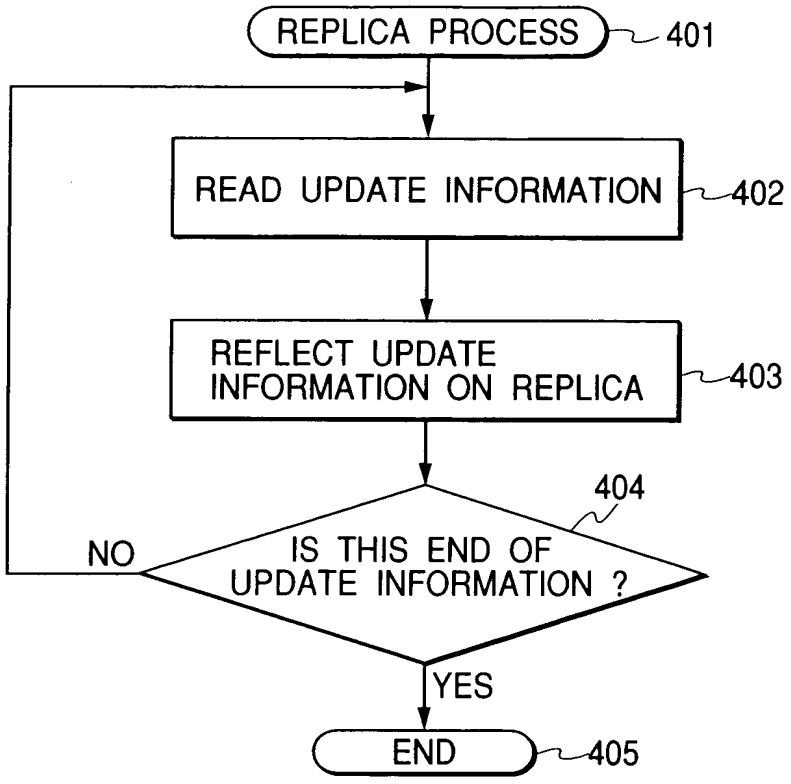
PREFERENCE SPECIFICATION a

311 REFLECTION TABLE	312 PREFERENTIAL KEY CONDITION	313 PREFERENTIAL ORDER
INVENTORY DATA	MERCHANDISE CATEGORY=A	1
	MERCHANDISE CATEGORY=B	2

PREFERENCE SPECIFICATION b

321 REFLECTION TABLE	322 PREFERENTIAL COLUMN	323 PREFERENTIAL ORDER
INVENTORY DATA	MERCHANDISE CATEGORY, MERCHANDISE CODE, INVENTORY	1
	MERCHANDISE NAME, UNIT PRICE	2

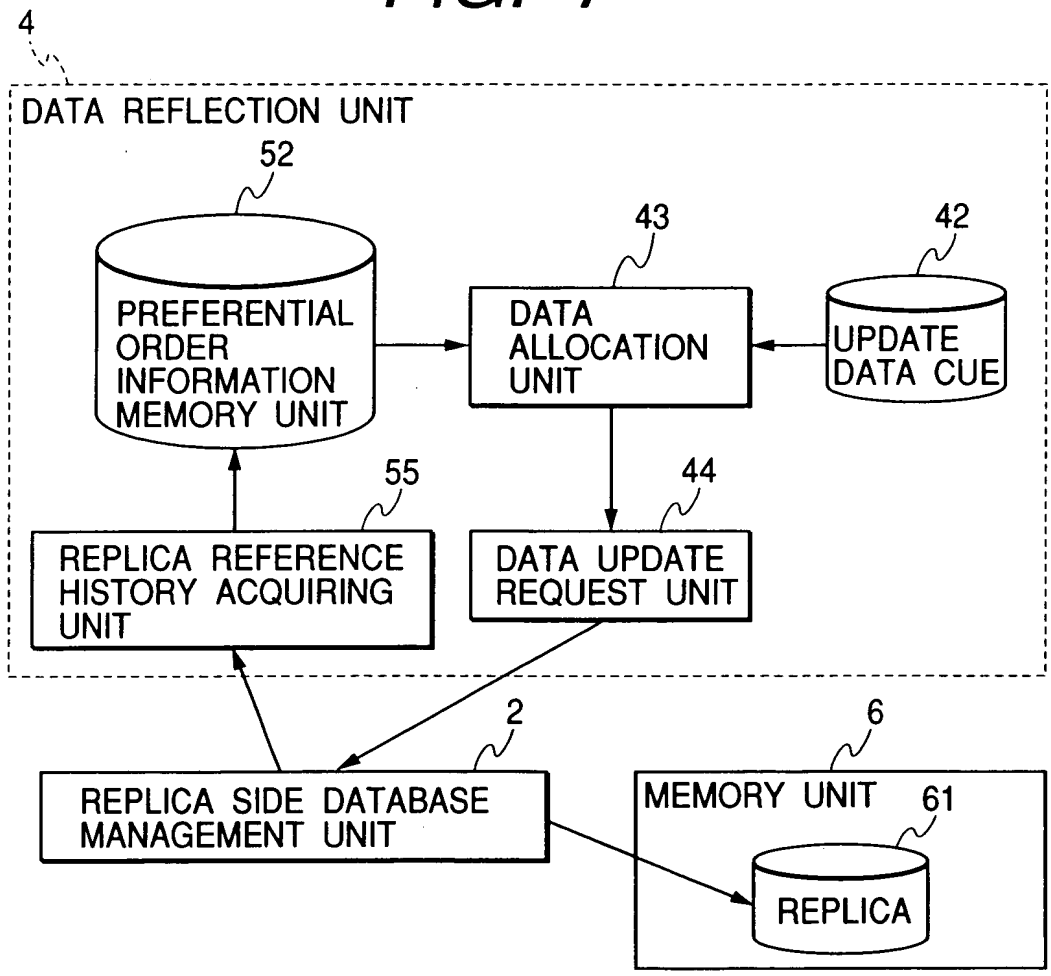
FIG. 6 PRIOR ART



UPDATE INFORMATION DATA CONTENT

501 UPDATE TABLE NAME	502 UPDATE TYPE	503 RECORD INFORMATION
INVENTORY TABLE	UPDATE	MERCHANDISE CATEGORY: A, MERCHANDISE CODE: 0001, INVENTORY: 20
MERCHANDISE MASTER	UPDATE	MERCHANDISE CODE: 0022, UNIT PRICE: 120,000
INVENTORY TABLE	UPDATE	MERCHANDISE CATEGORY: B, MERCHANDISE CODE: 0032, INVENTORY: 32
MERCHANDISE MASTER	INSERT	MERCHANDISE CODE: C, MERCHANDISE NAME: C CLEANER, UNIT PRICE: 42,000

FIG. 7


4
DATA REFLECTION UNIT
52
PREFERENTIAL ORDER INFORMATION MEMORY UNIT
43
DATA ALLOCATION UNIT
42
UPDATE DATA CUE
55
REPLICA REFERENCE HISTORY ACQUIRING UNIT
44
DATA UPDATE REQUEST UNIT
2
REPLICA SIDE DATABASE MANAGEMENT UNIT
6
MEMORY UNIT
61
REPLICA